

Alignment of Pantothenate Synthetases From Corn, Eucalyptus, Soybean, Tulip, Wheat, Rice, and Lotus

SEQ ID NO:2	cpj1c.pk005.c12fis	[corn]	
SEQ ID NO:4	crln.pk0125.c12fis	[corn]	
SEQ ID NO:7	eej1c.pk005.p14fis	[eucalyptus]	
SEQ ID NO:9	ssl.pk0021.d7fis	[soybean]	
SEQ ID NO:11	etb1c.pk004.j20fis	[tulip]	
SEQ ID NO:13	wlm96.pk036.k8fis	[wheat]	
SEQ ID NO:14	gi2292978	[rice]	
SEQ ID NO:15	gi2292921	[lotus]	
1			
SEQ ID NO:2	MAAAAAA-----VHEPEVIRDKAAMRAWSRRRRRAEKGKAVALVPTMGFLHGHLSLISAAVAAS-AGPIAVVSVIYVNPSPQFAPTE		90
SEQ ID NO:4	MAAAA-----VHEPEVIRDKAAMRAWSRRRRRAEKGKAVALVPTMGFLHGHLSLISAAVAAS-AGPVAVVSVIYVNPSPQFAPTE		DLA
SEQ ID NO:7	MAAPP-----KEPLVITDKAEMREWSRSARRQRTIALVPTMGFLHGHLSLISAAVAAS-AGPVAVVSVIYVNPSPQFAPTE		DLA
SEQ ID NO:9	MAPAP-----R---VISDKASMRWSRSRMRQAQKLI GLVPTMGFLHAGHLSLVAQARQLSDV-----VVSIVVNPSPQFAPTE		DLA
SEQ ID NO:11	MAAAPAASSAAAAASVSEPI ITSKPEMLAWSRRHRRLSHTIALVPTMGSLHAGHLSLISAAVAAS-AGPVAVVSVIYVNPSPQFAPTE		DLA
SEQ ID NO:13	MAAAG-----EPEVIRDKAAMRAWSRRRQRAEKTIVLVPTMGFLHGHLSLISAAVAAS-AGPVAVVSVIYVNPSPQFAPTE		DLA
SEQ ID NO:14	MA--P-----M---VISDKDEMRSRMSRQKLI ALVPTMGFLHGHLSLVRDAHNHADL-----VAVSIYVNPSPQFAPTE		DLA
SEQ ID NO:15	MAAP-----REPEVIRDKAAMRAWSRRRRRAEKGKAVVPTMGYLHQHLSLISAAAAAADPVAIVVTIYVNPSPQFAPTE		DLA
91			
SEQ ID NO:2	TYPDSDFAGDLRKLAAAT-GVVAAVFCPPDLYVRGSA--DRPSAAGASGGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV		180
SEQ ID NO:4	TYPDSDFAGDLGKLAAAT-GVVAAVFCPPDLYVRGSA--DRPSAASASGGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV		
SEQ ID NO:7	TYPDSDFEGDLGKLRAVPGGVDFVFRPQNLIDY GQREVG-GSGVESDNGSVSCLEEK-GMGHEAWVRVERLEKGMCKGKSRPVFFRGVATV		
SEQ ID NO:9	TYPDSDFDGDVKKLASVPGGVDFVFRPRLIDY GKNNGG-DVAEAGG--MVSCVE--SGSGHESWVRVERLEKGLCGKSRPVFFRGVATV		
SEQ ID NO:11	TYPADLAADLRNLRAAC-PSVAAVFCPTNPY-----ADGHETWVRVERLEKGLCGKSRPVFFRGVATV		
SEQ ID NO:13	TYPADLAGDLRKLAAAT-GAVHAVFNPPDLYHRGAASVSGRRRAEPAGAAASCCLE-AGGDGHETWIRVERLEKGLCGASRPVFFRGVATV		
SEQ ID NO:14	AYPSDFQGLQKLMSPVGGVDVVFHPHNLIDY GGDGDG-AVAECGGDVVSCVDRRSGFHETWVRAEKLEKPLCGKSRPVFFRGVATV		
SEQ ID NO:15	TYPDSDFAGDLRKLAAAT-GVVDVAVFNPPDLYVRGA---GRRGAGS--GGAI SCLEEAAGDGHETWVRVERLEKGLCGASRPVFFRGVATV		

FIG. 1A

Docket No: BB-1446  
 Title: Plant Genes Encoding Pantothenate Synthetase  
 Inventor: Steven Gutteridge, et. al.  
 Appl. No.: Unknown  
 E.I. DuPont de Nemours

181 270  
 SEQ ID NO: 2 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTAAALSGSNR-SQ  
 SEQ ID NO: 4 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 7 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 9 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 11 SKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 13 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 14 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ  
 SEQ ID NO: 15 SKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ

271 325  
 SEQ ID NO: 2 EIKDQIVRTITEAGGQVDYVEIVGQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI  
 SEQ ID NO: 4 EIKDQIVRTITEAGGQVDYVEIVGQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI  
 SEQ ID NO: 7 NLKDSVIQAIQEAAGKIDYAEIVDQESLEAVEEIRSPVVCVAAWFGKVRLLIDNIEIN-----V  
 SEQ ID NO: 9 KLTNLVIQSVTDAGGRIDYAEIVDQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINL-----MN  
 SEQ ID NO: 11 ELKDQIVRTITEAGGQVDYVEIVGQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINL-----TI  
 SEQ ID NO: 13 HIKDQIVRTITEAGGQVDYVEIVGQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINL-----TI  
 SEQ ID NO: 14 KLINLVVQSITEAGGQVDYAEIVDQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINL-----TI  
 SEQ ID NO: 15 QIKNKIVQTLTETGGQVDYVEIVGQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINL-----TI

FIG. 1B